REMARKS

Claims 1-38 are pending in the application.

Claims 1-38 have been rejected.

Rejection of Claims under 35 U.S.C. § 103(a)

Claims 1-38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shinohara, U.S. Patent No. 6,067,298 (hereinafter "Shinohara"), in view of Yin et al., U.S. Patent No. 5,768,257 (hereinafter "Yin"). Applicants respectfully traverse this rejection.

The cited art fails to teach or suggest a system in which, "approximately when the output traffic manager drops outbound packets or is about to drop said outbound packets, the output traffic manager communicates to the ingress receiver to drop inbound packets destined for the selected queue," as recited in claim 1.

Shinohara teaches a system in which: "In each output line corresponding queue within the output buffer module section 30, when the queue length Qoxbl exceeds the threshold value Qth_bpoxbl, the output buffer module section 30 originates the back pressure signal (BP_OXBL) 70 to all input buffer module sections. The input buffer module section 20 ceases to transmit cells to the output line to which the BP_OXBL signal 70 has been originated." Shinohara, col. 8, lines 12-17. Thus, Shinohara teaches a system in which one or more input buffer module sections cease to transmit cells to an output line if a back pressure signal has been originated.

Shinohara's communication to the input buffer module sections is used to cause the ingress buffer module sections to stop sending packets to the output line, not to cause the input buffer module sections to begin dropping packets. Shinohara neither teaches nor suggests a communication to drop packets. Thus, as noted by the Examiner, "Shinohara fails to teach the output traffic manager communicates to the ingress receiver to drop inbound packets destined for that queue." Office Action, pp. 2-3. Yin, both alone and in combination with Shinohara, also fails to teach or suggest this feature.

Yin teaches a system in which "packet discard decision block 430 decides when to drop a packet to be transmitted over the ATM network based on the ATM network feedback information carried in RM cells received from the ATM network and per VC buffer usage." Yin, col. 6, lines 15-20. Thus, in Yin's system, packet drop occurs in response to feedback received from the network, not based on feedback received from an output traffic manager. Accordingly, Yin, both alone and in combination with Shinohara, clearly fails to teach or suggest claim 1.

Furthermore, as noted in the previous responses, Shinohara would not be expected to suggest the claimed invention, given that the reference does not suggest a need to drop packets in an ingress receiver in response to a communication from an output traffic manager. Instead, Shinohara focuses on flow control mechanisms that determine when one stage of a switch can release packets to another stage. For example, in "each output line corresponding queue within the output buffer module section 30, when the queue length Qoxbl exceeds the threshold value Qth_bpoxbl, the output buffer module section 30 originates the back pressure signal (BP_OXBL) 70 to all input buffer module sections. The input buffer module section 20 ceases to transmit cells to the output line to which the BP_OXBL signal 70 has been originated." Shinohara, col. 8, lines 12-20. Thus, Shinohara teaches a flow control technique to control when packets are released by an input stage, not a technique to control when packets are dropped. It is noted that releasing packets from the input stage (i.e., allowing those packets to be transmitted from the input buffer module section 20) is not the same as dropping packets.

Yin would also not be expected to teach or suggest the claimed invention, given that Yin is concerned with controlling when packets to be sent over an ATM network are dropped based on signals received from the ATM network. In contrast to Yin's teachings, which involve feedback cells received from the ATM network, claim 1 is concerned with a communication between an output traffic manager and an ingress receiver within an apparatus for switching packets from a network. In other words, Yin teachings concern communication between devices in a network, while claim 1 is concerned with a communication that is internal to a device that switches packets from a network. Accordingly, Yin would not be expected to suggest an "output traffic manager

[that] communicates to the ingress receiver to drop inbound packets destined for the selected queue," as recited in claim 1.

Additionally, there is no suggestion to combine Shinohara and Yin. The Office Action states that "it would have been obvious... to implement the dropping method of Yin into Shinohara at the input buffer of Shinohara to reduce the traffic load and [sic] during the congested period." Office Action, page 3. However, there is no evidence that implementing the dropping method of Yin would result in a reduction of traffic load in the system of Shinohara, nor has any portion of either reference been cited in support of this proposition. "To support the conclusion that the claimed combination is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed combination or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references... [S]implicity and hindsight are not the proper criteria for resolving the issue of obviousness." *Ex Parte Clapp*, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. & Int'f 1985).

Additionally, the feedback mechanisms used in Shinohara and Yin are completely different, and there is no suggestion that a technique used in one system would work in the other. For example, in Yin, an ATM cell is conveyed via an ATM network to provide feedback from the ATM network to the network device. This is drastically different than the technique taught in Shinohara, which involves providing feedback between sections of an ATM switching system via a back pressure signal. It is not clear how feedback techniques involving transmitting cells via a network are relevant to feedback techniques used with an ATM switching system, nor is it clear that such techniques could be combined.

Even if Shinohara and Yin are combined, the resulting combination fails to teach or suggest the claimed invention. At best, the claimed combination would drop packets in response to a cell received from an ATM network (as taught in Yin) and would prevent packets from being released from an input section to an output section if the output section has asserted a back pressure signal (as taught in Shinohara). Thus, the combination still clearly fails to teach or suggest the claimed invention. Furthermore, it is unlikely that such a combination would arise, given that the use of one of these flow

control techniques (e.g., such as that taught in Yin) is likely to render the use of another flow control technique (e.g., such as that taught in Shinohara) unnecessary.

Claims 2-14 are patentable over the cited art for at least the reasons provided above with respect to claim 1. Claims 15-38 are patentable for similar reasons to those provided above with respect to claim 1.

Additionally, the cited art fails to teach or suggest an ingress receiver that discontinues inbound packet drop after a predetermined time, as recited in claim 7. The Examiner relies on Shinohara to reject this claim. The cited portion of Shinohara recites:

> "The ATM switching system of claim 2, wherein said rate computing means periodically computes an acceptable rate for each service class based on a status time change of said virtual queue by service class or said output line corresponding queue of said output buffer module section, and wherein said input buffer module section further includes an internal rate control means that controls a cell transmission for each output line based on said acceptable rate." Col. 14, lines 38-46.

As noted in the previous responses, this section simply describes how the input buffer module of Shinohara controls cell transmissions based on an acceptable rate. Furthermore, the quoted section focuses on controlling cell transmissions, not on controlling whether packets are dropped. No teaching or suggestion concerning whether packet drop should be discontinued is provided, nor would such a teaching or suggestion be expected, given that the quoted section is not concerned with packet drop. The combination of Yin and Shinohara also fails to provide such a suggestion. Accordingly, claim 7 is clearly patentable over the cited art. Claims 22, 30, and 38 are additionally patentable over the cited art for similar reasons.

CONCLUSION

In view of the amendments and remarks set forth herein, the application and the claims therein are believed to be in condition for allowance without any further examination and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephone interview, the Examiner is invited to telephone the undersigned at 512-439-5087.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Amendment, COMMISSIONER FOR PATENTS, P. O. Box 1450, Alexandria, VA 22313-1450, on November 30, 2004.

Brenna A Brock — 11-30-2004

Attorney for Applicant(s) — Date of Signature

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